

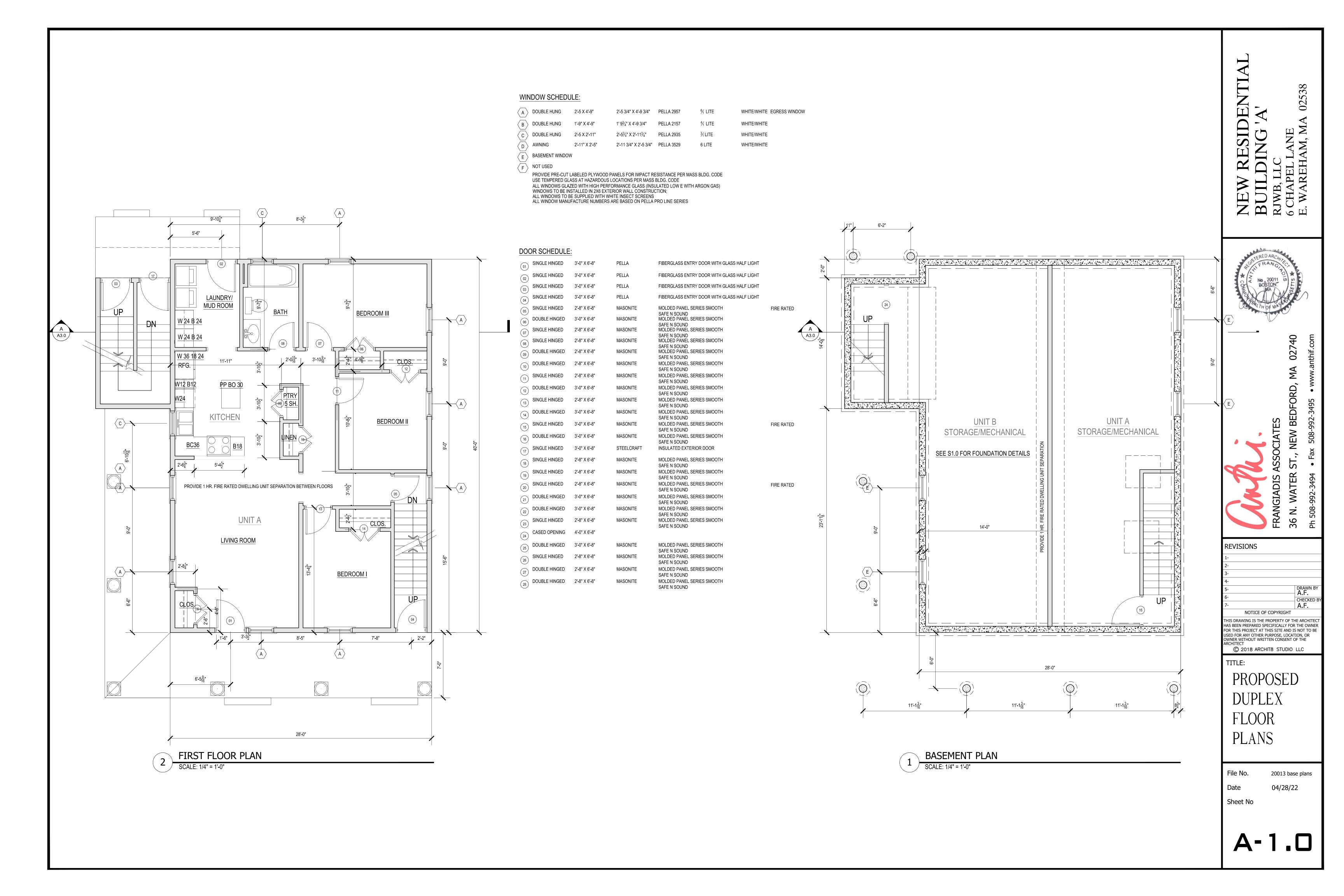
DRAWING INDEX

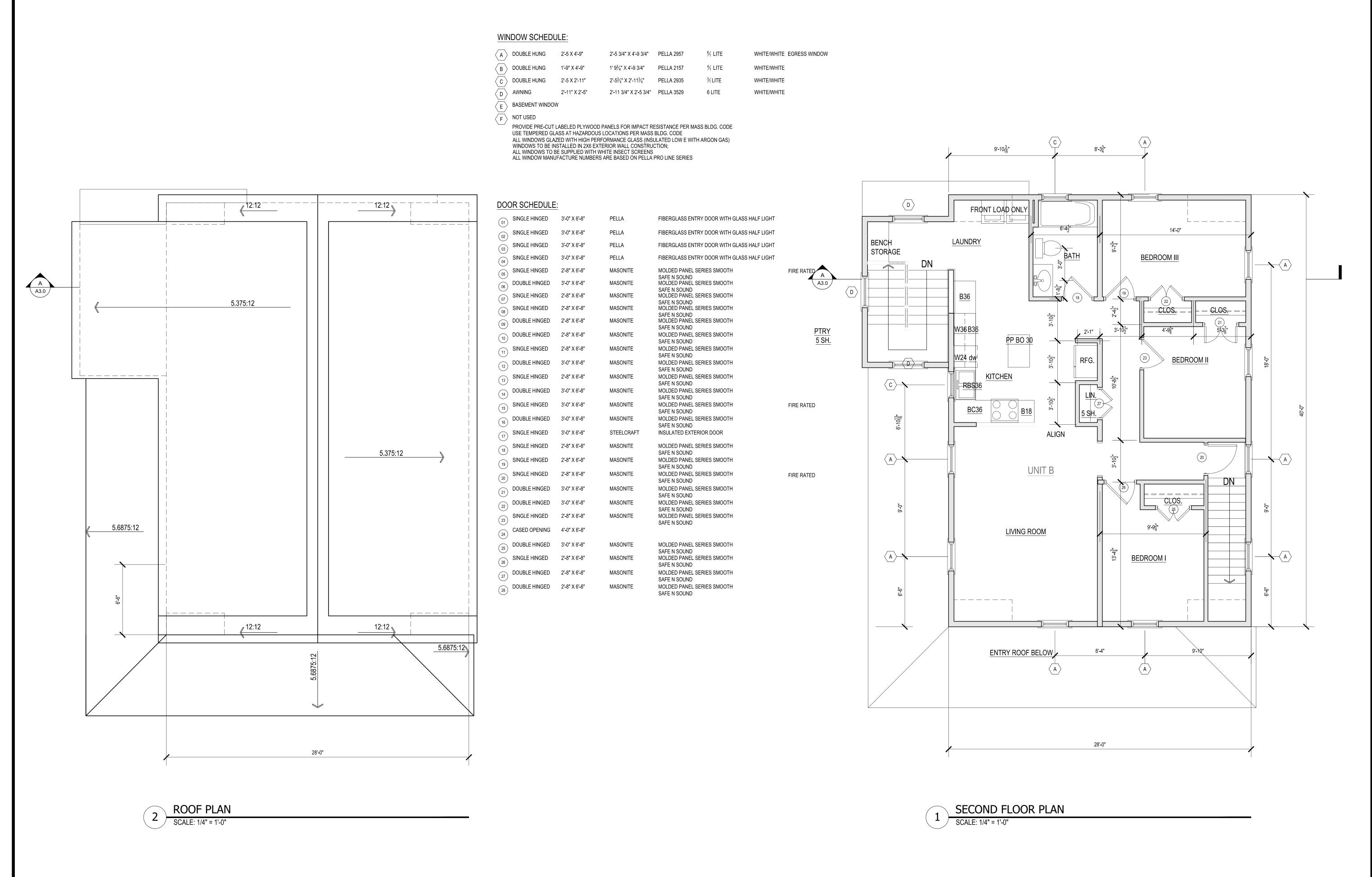
A-1.0 A-1.1	PROPOSED DUPLEX FLOOR PLANS & SCHEDULES PROPOSED DUPLEX FLOOR PLANS & SCHEDULES
A-2.0	PROPOSED EXTERIOR ELEVATIONS
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S-1.1 S-1.2	PROPOSED FOUNDATION PLAN & NOTES PROPOSED FRAMING PLANS & DETAILS

PROJECT AREA CALCULATIONS

asement - Crawl Space	1232 SF
rst Floor Unit A	1232 SF
econd Floor Unit B	1232 SF

2022 28, SET **PERMIT**





SIDEN



02740

BEDFORD, WATER ST. 36 N.

REVISIONS

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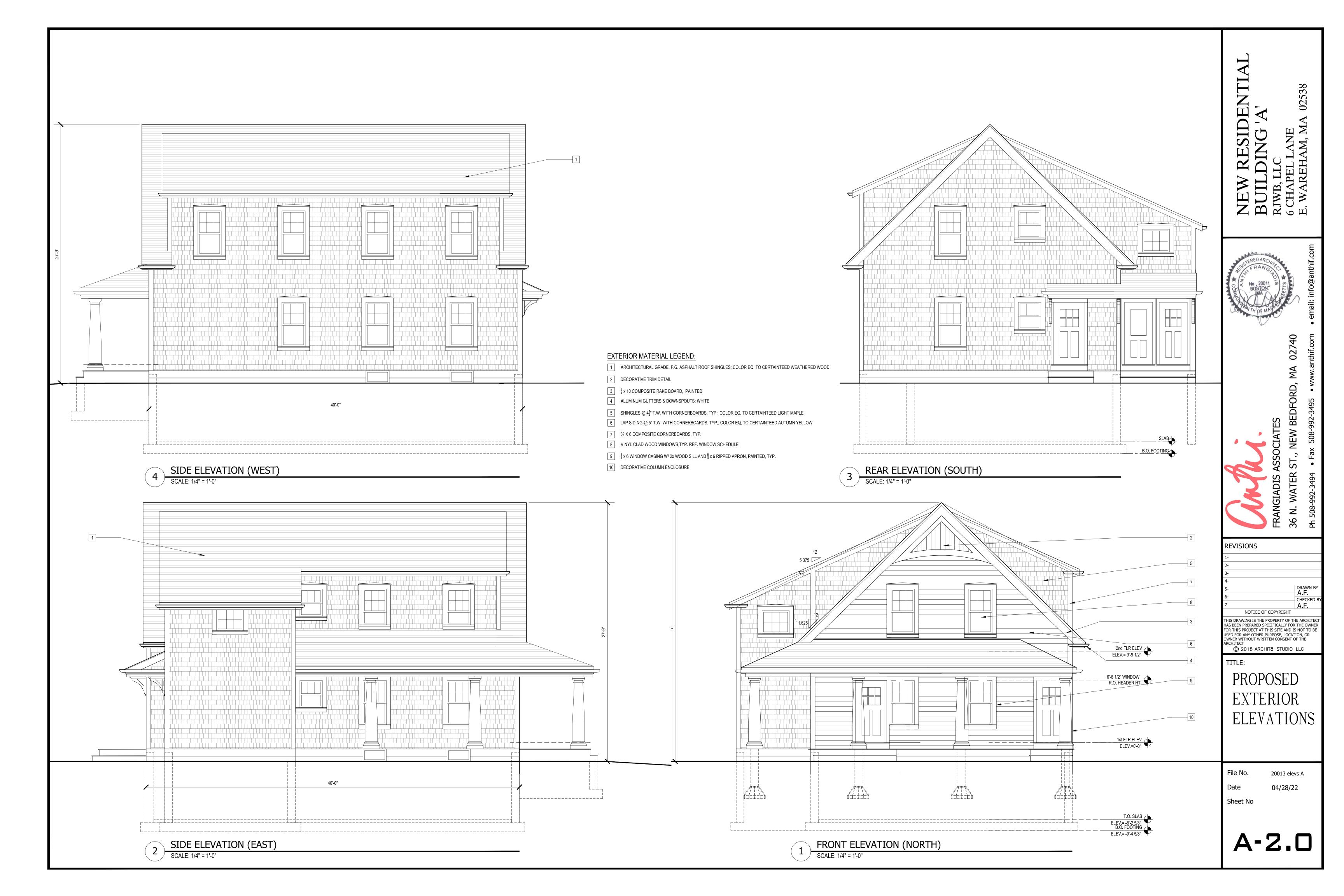
PROPOSED DUPLEX FLOOR PLANS

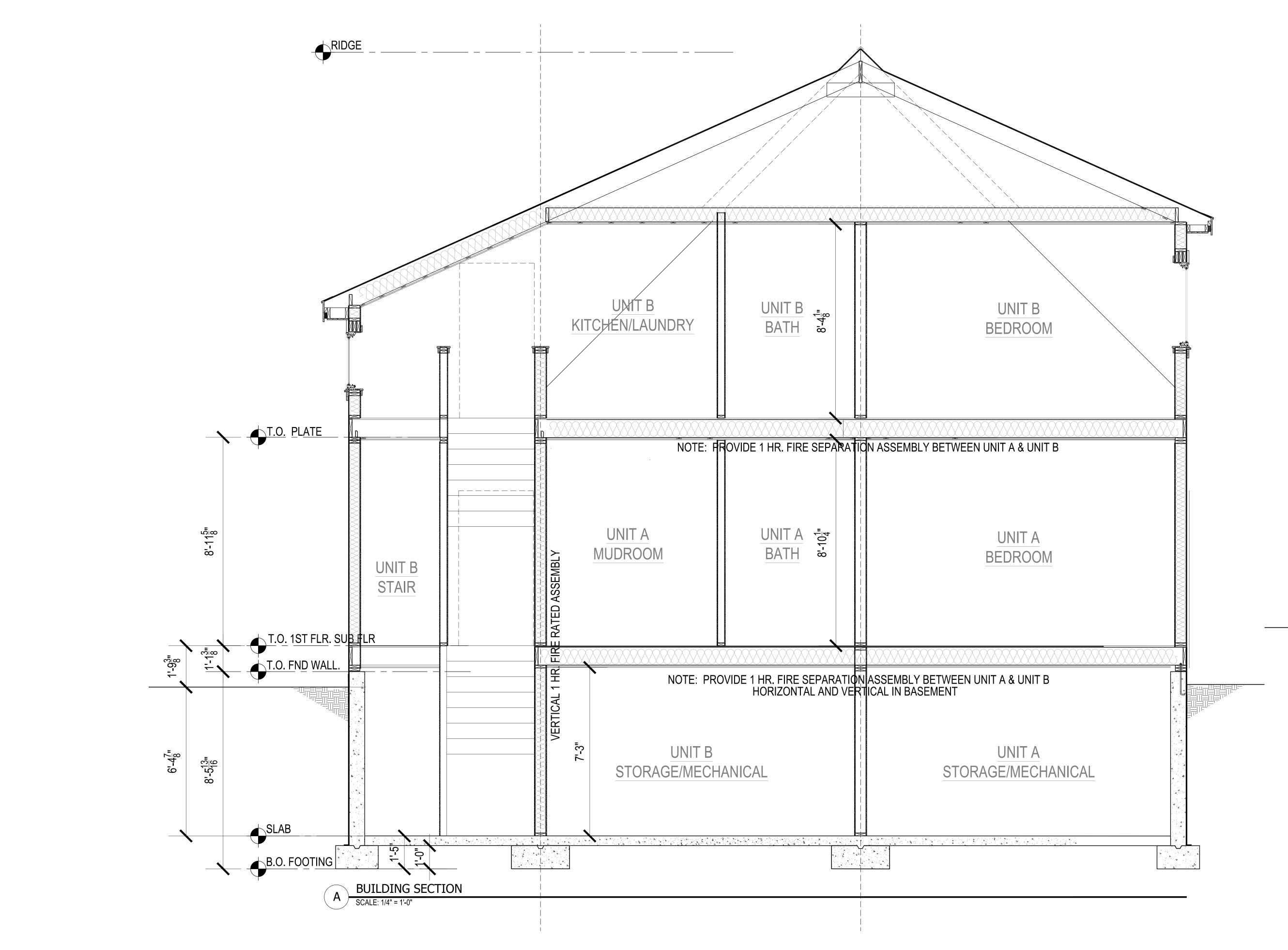
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04/28/22 Date Sheet No

20013 BASE PLANS

A-1.1





TYPICAL SECTION NOTES:

EXTERIOR WALLS:

- SHINGLES @ 4-1/2" ± EXPOSURE OR CLAPBOARD SIDING @ 5" EXPOSURE
- TYVEK HOUSE WRAP OR EQUAL
- 1/2" CDX PLYWOOD SHEATHING - BATT INSULATION (R-21)
- 2 x 6 STUDS 16" O.C.
- 1/2" GWB PAINTED

ROOF CONSTRUCTION:

- F.G. ASPHALT SHINGLES (ARCHITECT GRADE)
- 30# SATURATED BUILDING FELT
- ICE & WATERSHIELD @ EAVES, VALLEYS, RISING WALLS
- 1/2" CDX PLYWOOD ROOF SHEATHING
- 2 x 10 RAFTERS w/ SIMPSON
- H2.5 CLIPS @ 16" O.C. (UNLESS OTHERWISE NOTED)
- INSULATION (R-30)
- (AT ALL FINISHED LOCATIONS)
- 1 x 3 STRAPPING @ 16" O.C.
- 1/2" GWB PAINTED

TYP. FLOOR CONSTRUCTION:

- 3/4" ENG. PLYWOOD SUBFLOOR GLUED & NAILED OVER - 2 X 10 @ 16"O.C.. (ALT. TJI 110@ 16" O.C.) - R-38 FIBERGLASS BATT INSULATION FOR STC 50 RATING

(AT ALL FINISHED LOCATIONS) - 1 x 3 STRAPPING @ 16" O.C.

- 5/8" FIRERATED GWB PAINTED

BASEMENT/FOUNDATION WALL: - BITUMINOUS DAMPPROOFING - 8" REINF. CONCRETE FOUNDATION WALL KEYED TO - CONT. 12" DEEP X 20" WIDE CONC. FTG.

BEDFORD, 36 N. WATER ST., REVISIONS

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BUILDING SECTION

File No. 20013 elevs bldg a 04/28/22 Date

Sheet No

A-3.0

GENERAL STRUCTURAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MASSACHUSETTS STATE BUILDING CODE (9TH EDITION)
- 2. THE CONTRACTOR SHALL NOT SCALE THE CONTRACT DRAWINGS.
- 3. TYPICAL AND CERTAIN SPECIFIC CONDITIONS HAVE BEEN DETAILED ON THE FOR CONDITIONS NOT SPECIFICALLY SHOWN, THE CONTRACTOR SHALL PREPARE DETAILS SIMILAR TO THOSE SHOWN AND SUBMIT THEM WITH THE RELEVANT SHOP DRAWINGS TO THE ENGINEER
- 4. ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMISSION OF RELEVANT SHOP DRAWINGS FOR REVIEW AND PRIOR TO COMMENCEMENT OF FABRICATION AND CONSTRUCTION.
- 5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF FIELD CONDITIONS WHICH ARE IN CONFLICT WITH THE STRUCTURAL CONTRACT DOCUMENTS.
- 6. THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, AND OTHER METHODS OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- 7. THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL CONTRACT DOCUMENTS WITH CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS BEFORE COMMENCEMENT OF WORK AND SHALL NOTIFY THE ENGINEER OF ANY CONFLICTS.

<u>DESIGN LOADS</u>

- 1. FLOOR LIVE LOADS
 - A. ATTIC 20 PSF

B. FIRST FLOOR - 40 PSF

- 2. ROOF LIVE LOADS
- A. 20 PSF
- 3. DEAD LOAD ROOF & FLOOR 10 PSF
- 4. WIND LOADS
 - A. REFERENCE WIND VELOCITY = 110 MPH
 - B. REFERENCE WIND PRESSURE = 21 PSF
 - C. EXPOSURE = BD. DESIGN PRESSURE FOR VERTICAL PARTS OF STRUCTURE:
 - BEYOND SALIENT CORNERS = 25.2 PSF WITHIN SALIENT CORNERS = 35.7 PSF

CAST-IN-PLACE CONCRETE

- 1. DESIGN AND PLACEMENT OF ALL CONCRETE WORK AND REINFORCING SHALL CONFORM TO THE LATEST ACI CODES AND MANUALS 301, 315, AND 318.
- 2. THE CONTRACTOR SHALL PROVIDE TIES AND BRACING WHERE NECESSARY DURING CONSTRUCTION, TO REMAIN IN PLACE UNTIL THE STRUCTURES ARE COMPLETE.
- 3. DESIGN AND ERECTION OF ALL FORMWORK SHALL BE IN ACCORDANCE WITH ACI 347 AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 4. ALL CAST-IN-PLACE CONCRETE SHALL CONTAIN TYPE I OR II PORTLAND CEMENT AND SHALL BE SUPPLIED BY THE SAME MANUFACTURER FOR THE ENTIRE PROJECT.
- 5. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR ENTRAINED. ALL INTERIOR CONCRETE SHALL BE NON AIR ENTRAINED. SEE SPECIFIC REQUIREMENTS IN THE SPECIFICATIONS.
- 6. ALL CAST-IN-PLACE CONCRETE SHALL CONFORM WITH THE FOLLOWING:

 - SLABS ON GRADE

 - FOUNDATION WALLS AND FOOTINGS
- 7. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 OR ASTM A 616, INCLUDING SUPPLEMENT S1, GRADE 60.

STRENGTH AT 28 DAYS MAX. SLUMP

1-1/2"

1-1/2"

3000 PSI

3000 PSI

- 8. PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE. REINFORCEMENT SPLICES SHALL BE MADE ONLY AS REQUIRED OR PERMITTED ON THE CONTRACT DRAWINGS.
- 9. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND SHALL BE PROVIDED IN FLAT SHEETS. IT SHALL BE SUPPORTED ON CONTINUOUS SLAB BOLSTERS AND LAPPED ONE AND ONE-HALF MESH.
- 10. REINFORCEMENT SHALL NOT BE FIELD CUT, UNLESS OTHERWISE INDICATED. WHEN PERMITTED, REINFORCEMENT SHALL BE COLD BENT. HEATING REINFORCEMENT IS
- 11. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED
 - CONCRETE CAST AGAINST EARTH FORMED CONCRETE EXPOSED TO EARTH OR WEATHER
 - #5 AND SMALLER
 - SLABS AND WALLS NOT EXPOSED TO EARTH OR WEATHER
 - BEAM STIRRUPS, COLUMN AND PIER TIES CHAMFER ALL EXPOSED CONCRETE EDGES 1/2", UNLESS OTHERWISE INDICATED.

PROVIDE BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH ACI 315 AND CRSI "MANUAL OF STANDARD PRACTICE", CHAPTER 3. ALL BAR SUPPORTS IN AREAS WHERE CONCRETE WILL BE EXPOSED SHALL HAVE PLASTIC TIPPED FEET. THE CONTRACTOR IS CAUTIONED THAT CARE MUST BE EXERCISED TO PREVENT EXPOSURE OF TIE WIRE OR OTHER MATERIALS WHICH MAY CAUSE STAINING OF EXPOSED CONCRETE. PROPER COVER SHALL BE MAINTAINED ON ALL REINFORCEMENT.

CURE CONCRETE IMMEDIATELY AFTER FINISHING IN ACCORDANCE WITH ACI 301, ACI 305R, ACI 306R, AND ACI 308.

FIELD TESTING:

A. UNLESS OTHERWISE REQUIRED BY THE CONTRACT DOCUMENTS, CAST ONE SET FOUR (4) CONCRETE TEST CYLINDERS (6" DIA. x 12" HIGH) FOR EACH 50 CUBIC YARDS OF CONCRETE PLACED. FOR 16 TO 24 HOURS AFTER CASTING, PROTECT TEST SPECIMENS IN ACCORDANCE WITH ASTM C31. PROVIDE AN ON SITE CURE BOX FOR CYLINDER STORAGE DURING INCLEMENT WEATHER. DO NOT TRANSPORT SPECIMENS TO THE LABORATORY UNTIL AFTER THE INITIAL PROTECTION PERIOD.

B. AT THE TIME OF CASTING EACH SET OF TEST CYLINDERS, SAMPLE CONCRETE IN ACCORDANCE WITH ASTM C172 AND PERFORM THE FOLLOWING MEASUREMENTS AT THE POINT OF CONCRETE PLACEMENT:

- 1. AMBIENT TEMPERATURE
- 2. CONCRETE TEMPERATURE
- 3. UNIT WEIGHT IN ACCORDANCE WITH ASTM C-138 4. SLUMP IN ACCORDANCE WITH ASTM C-143
- 5. AIR CONTENT IN ACCORDANCE WITH ASTM C-173 OR ATM C-231

FOUNDATION AND SLAB-ON-GRADE NOTES

FOUNDATIONS SHALL BEAR ON STRATA WITH A BEARING PRESSURE OF 2000 PSF.

NO BACKFILLING AGAINST UNDERGROUND OR RETAINING WALLS SHALL OCCUR UNTIL THE WALLS HAVE ATTAINED THEIR SPECIFIED 28-DAY STRENGTHS UNLESS ADEQUATE BRACING IS PROVIDED TO RESIST HORIZONTAL LOADS IMPOSED BY BACKFILLING, EXCEPT WHERE THE DIFFERENTIAL HEIGHT OF BACKFILL ON EITHER SIDE OF THE WALL IS LESS THAN TWO FEET.

WOOD FRAMING NOTES

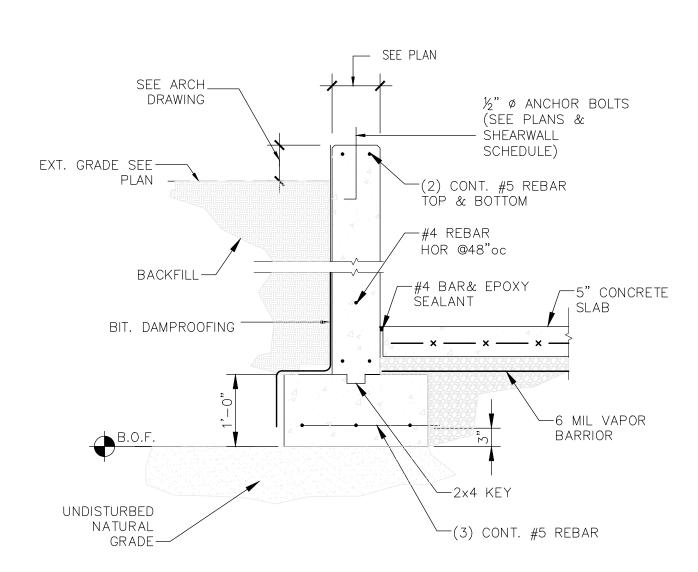
- ALL ROUGH FRAMING SHALL BE NO. 2 OR BETTER SPRUCE-PINE-FIR, UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS.
- ALL TWO (2) INCH NOMINAL LUMBER TO BE SEASONED TO 19% MAXIMUM MOISTURE

ALL WOOD IN CONTACT WITH CONCRETE, MASONRY, OR EARTH SHALL BE PRESSURE

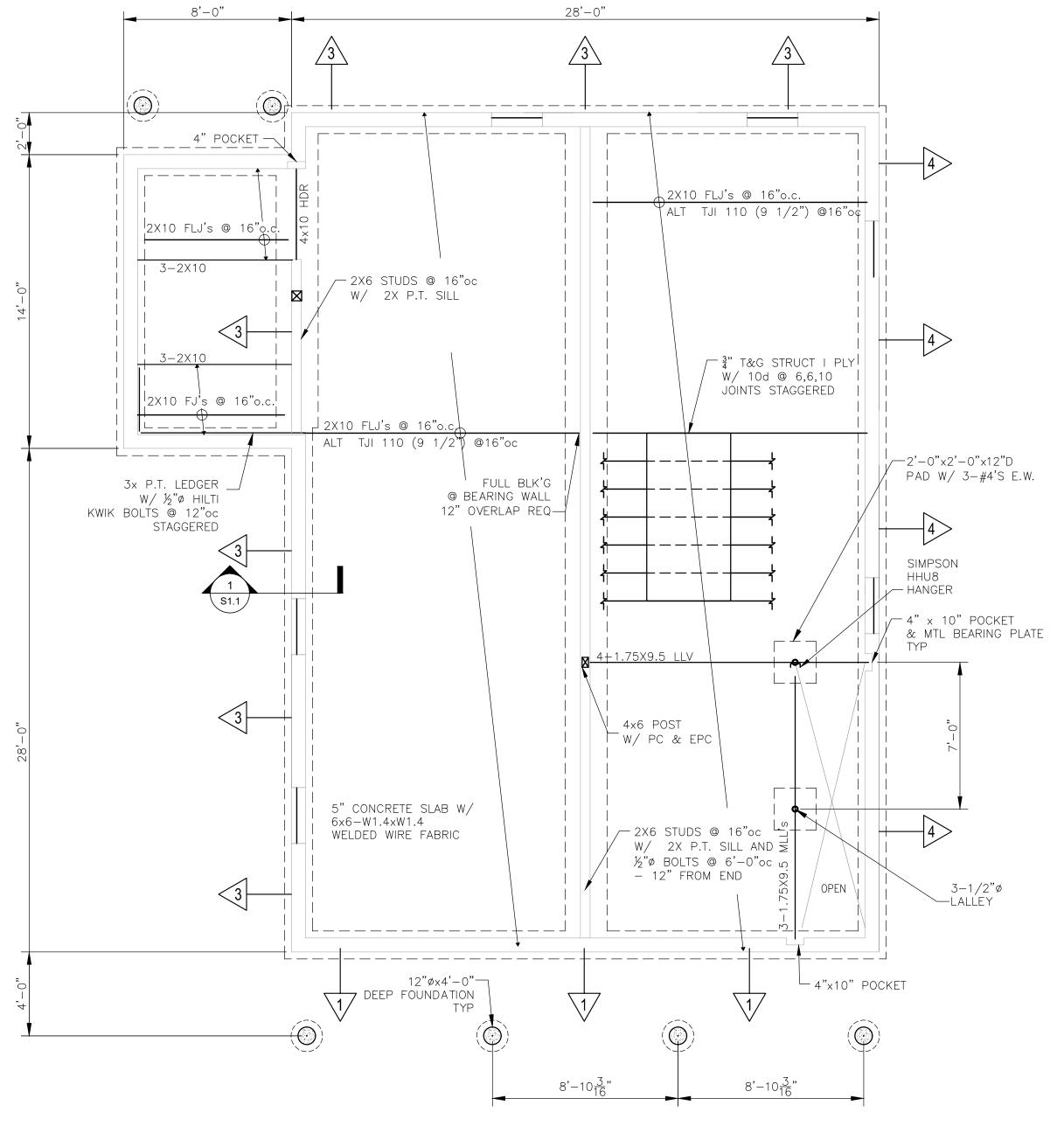
- ALL LUMBER AND PLYWOOD SHALL BE GRADE-STAMPED BY THE APPROPRIATE MANUFACTURER'S ASSOCIATION FOR THE APPROPRIATE USE.
- TREATED WITH A CCA-C 0.40 PROCESS. ALL WOOD FRAMING SHALL BE BUILT PLUMB, LEVEL, SQUARE, AND TRUE WITH
- ROUGH CONNECTIONS SHALL BE ACCURATELY CUT AND TIGHTLY FITTED AS NECESSITATED BY THE CONDITIONS ENCOUNTERED TO PROVIDE FULL BEARING WITHOUT

ADEQUATE BRACING AND CONNECTION HARDWARE TO ENSURE A RIGID STRUCTURE.

- ALL FLOORS AND THE ROOF SHALL BE SHEATHED WITH 3/4" TONGUE AND GROOVE STRUCTURAL 1 PLYWOOD, GLUED AND NAILED, UNLESS OTHERWISE SHOWN OR NOTED.
- ALL PLYWOOD SHALL BE LAID WITH LONG DIMENSIONS PERPENDICULAR TO SUPPORTS. STAGGER ALL JOINTS. PROVIDE BLOCKING AT ALL JOINTS ONLY WHERE SHOWN ON PLAN.
- ALL PLYWOOD SHALL BE FASTENED WITH 10d NAILS 6" ON CENTER AT SUPPORTED PANEL EDGES AND AT 10" ON CENTER AT INTERMEDIATE SUPPORTS, UNLESS OTHERWISE SHOWN OR NOTED (SPECIFIC SHEAR WALLS & DIAPHRAGMS).
- 10. ALL INTERIOR DOOR HEADERS SHALL CONSIST OF TWO 2X8'S WITH ONE LAYER OF 1/2" PLYWOOD SPACER, UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS. FOR 2x6 EXTERIOR STUD WALLS, ALL EXTERIOR WINDOW AND DOOR HEADERS OVER THREE (3) FEET WIDE SHALL BE THREE 2X8'S WITH TWO LAYERS OF 1/2" PLYWOOD, U.N.O. AT EXTERIOR HEADERS, 1" THICK RIGID INSULATION MAY BE USED IN PLACE OF [2] 1/2" PLYWOOD SPACERS; LOCATE BETWEEN DOUBLE HEADER AT OUTSIDE FACE AND SINGLE HEADER AT INSIDE FACE.
- ALL HEADERS OVER SIX (6) FEET IN LENGTH SHALL REST ON DOUBLE STUD POSTS AS A MINIMUM, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- SIMPSON CONSTRUCTION HARDWARE (OR APPROVED EQUAL) SHALL BE FASTENED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND NAILING SCHEDULE. THE GENERAL CONTRACTOR MUST BE FAMILIAR WITH, AND HAVE THE APPROPRIATE PRODUCT CATALOGS ON SITE.
 - A. ALL SPECIFIED FASTENERS MUST BE INSTALLED ACCORDING TO THE INSTRUCTIONS IN THE SIMPSON CATALOG. INCORRECT FASTENER QUANTITY, SIZE, TYPE, MATERIAL, OR FINISH MAY CAUSE THE CONNECTION TO FAIL. 16D FASTENERS ARE COMMON NAILS (8 GAGE X 3-1/2") AND CANNOT BE REPLACED WITH 16D SINKERS (9GAGE X 3-1/4") UNLESS OTHERWISE SPECIFIED.
 - B. BOLT HOLES SHALL BE A MINIMUM OF 1/32" AND A MAXIMUM OF 1/16" LARGER THAN THE BOLT DIAMETER (PER THE 1997 NDS, SECTION 8.1.2.1.). C. INSTALL ALL SPECIFIED FASTENERS BEFORE LOADING THE CONNECTION.
 - D. PNEUMATIC NAILERS MAY BE USED TO INSTALL CONNECTORS, PROVIDED THE CORRECT QUANTITY AND TYPE OF NAILS ARE PROPERLY INSTALLED IN THE NAIL HOLES. TOOLS WITH NAIL HOLE-LOCATING MECHANISMS SHOULD BE USED. FOLLOW THE MANUFACTURER'S INSTRUCTIONS AND USE THE APPROPRIATE SAFETY EQUIPMENT.
 - E. JOISTS SHALL BEAR COMPLETELY ON THE CONNECTOR SEAT AND THE GAP BETWEEN THE JOIST AND THE HEADER SHALL NOT EXCEED 1/8".
- UNLESS NOTED OTHERWISE, MINIMUM FASTENING OF WOOD MEMBERS SHALL CONFORM TO TABLE 2305.2 OF THE MASSACHUSETTS BUILDING CODE.
- ALL PLYWOOD OR OSB SHALL BE APA RATED AND SHALL BE ADEQUATELY SPACED AT JOINTS (1/8" TYP) AS REQUIRED BY APA FOR EXPANSION.
- ALL SOLID WOOD POSTS SHALL BE DOUGLASS FIR NO. 1 OR BETTER.
- BEAMS NOTED AS "PSL" SHALL BE "PARALLAM" AS MANUFACTURED BY TRUS JOIST MACMILLAN (E=1.800.000 PSI, FB=2900 PSI). PARALLAM PRODUCTS SHALL BE ADEQUATELY STORED AND COVERED AT THE JOB SITE TO BE PROTECTED FROM WATER DAMAGE PRIOR TO INSTALLATION.
- 17. BEAMS NOTED AS "LVL" SHALL BE "MICROLLAM" AS MANUFACTURED BY TRUS JOIST MACMILLAN (E=1,900,000 PSI, FB=2600 PSI). MICROLLAM PRODUCTS SHALL BE ADEQUATELY STORED AND COVERED AT THE JOB SITE TO BE PROTECTED FROM WATER DAMAGE PRIOR TO INSTALLATION.
- 18. TJI JOISTS SHALL BE BY TRUS-JOIST PRO 150 SERIES OR EQUAL WITH LVL FLANGES AND OSB WEBS. PROVIDE BRIDGING PER MANUFACTURERS RECOMMENDATIONS.
- SHEAR WALL SHEATHING SHALL BE IN ACCORDANCE WITH SHEARWALL SCHEDULE. ALL SHEETS SHALL BE STAMPED WITH THE MANUFACTURER'S INFORMATION AND SHEATHING CERTIFICATION.
- 20. ALL STUDS SHALL ALIGN WITH TRUSSES. AT TYPICAL AREAS SUCH AS OPENING JAMBS, PROVIDE STUDS OR BLOCKING TO MAINTAIN A SOLID CONTINUOUS LOAD PATH TO



FOUNDATION SECTION SCALE: 3/4" = 1'-0"



FOUNDATION / FIRST FLOOR FRAMING PLAN SCALE: 1/4" = 1'-0"

'ATER

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File No.

20013 STRUCTURAL Date 04/28/22

Sheet No

	HEADER S	SC
OPENING	ROOF	
LESS THAN 3'-0"	2-2X6	
3'-1" to 5'-0"	2-2X6	
5'-1" to 7'-0"	2-2X8	

HOLD-DOWN ATTACHMENT

HD-5B&4X POST

A35 @ 6" O.C.

ST2115

A35 @ 14" O.C. HD-3B&2-2X POST

A35 @ 20" O.C.

A35 @ 14" O.C.

A35 @ 14" O.C.

A35 @ 6" O.C.

NOTES:

7/16" CDX 8d@ 6, 6, 12

1)15/32" CDX | 10d@ 2, 2, 12

PLYWOOD NAILING

8d@ 6, 6, 12

SEE NOTE

8d@ 6, 6, 12

7/16" CDX

1. 3X FRAMING REQUIRED AT ADJOINING PANEL EDGES

SHEAR PANEL SCHEDULE

q (all)

475

475

2. 4X OR 2-2X NAILED WITH 16d NAILS @ 6"O.C.

(3) NAILS

16d @ 4"O.C.

16d @ 4"O.C.

475 | 16d @ 6"O.0

475 16d @ 4"O.C

770 16d @ 8"O.C.

264 16d @ 16"O.C.

BOLTS

NA

1/2" @ 36" O.C.

1/2" @ 48" O.C.

1/2" @ 12" O.C. 1/2" @ 4' O.C.

A35'S OT REQUIRED IF PANEL NAILS TO FRAMING MEMBER ABOVE TOP PLATE 4. ZIP BOARD MAY BE USED IN LIEU OF PLYWOOD SHEATHING.

HEADER SCHEDULE					
	2x6 STUD WALLS				
OPENING	ROOF	ONE FLR	ONE FLR + ROOF		
LESS THAN 3'-0"	2-2X6	2-2X6	2-2X6		
3'-1" to 5'-0"	2-2X6	2-2X8	2-2X8		
5'-1" to 7'-0"	2-2X8	2-2X10	2-2X10		
7'-1" to 8'-0"	2-2X8	2-2X10	2-2X12		

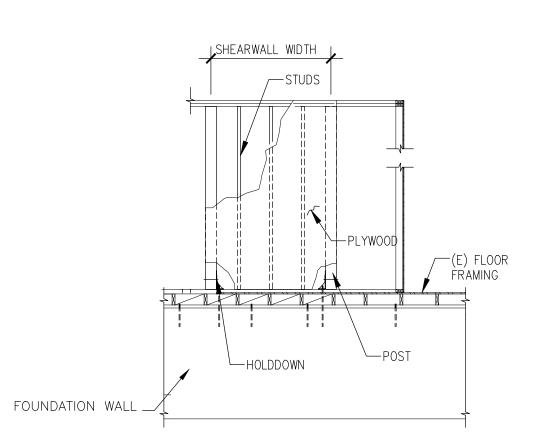
NOTES:

1. PROVIDE AND INSTALL HEADERS ACCORDANCE WITH THE ABOVE SCHEDULE FOR INDICATED ROUGH OPENINGS ON ARCHITECTURAL PLANS AND UNLESS NOTED OTHERWISE. HEADER SPANS EXCEEDING TABULATED VALUES SHALL BE NOTED ON FRAMING PLANS.

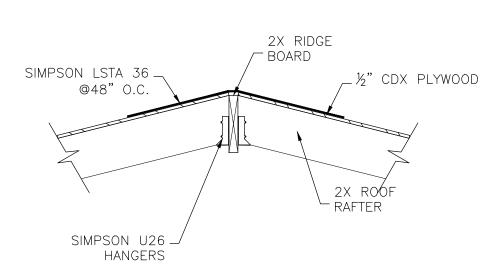
2. PROVIDE 3" MINIMUM BEARING AT EACH END.

SHEARWALL SCHEDULE

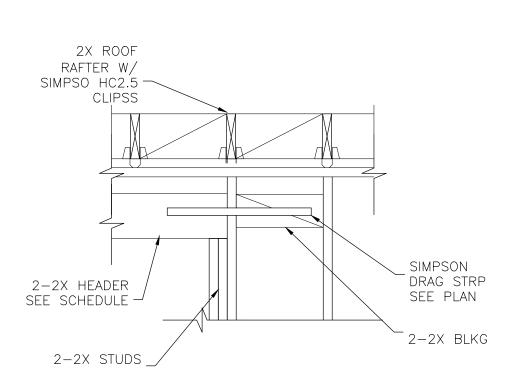
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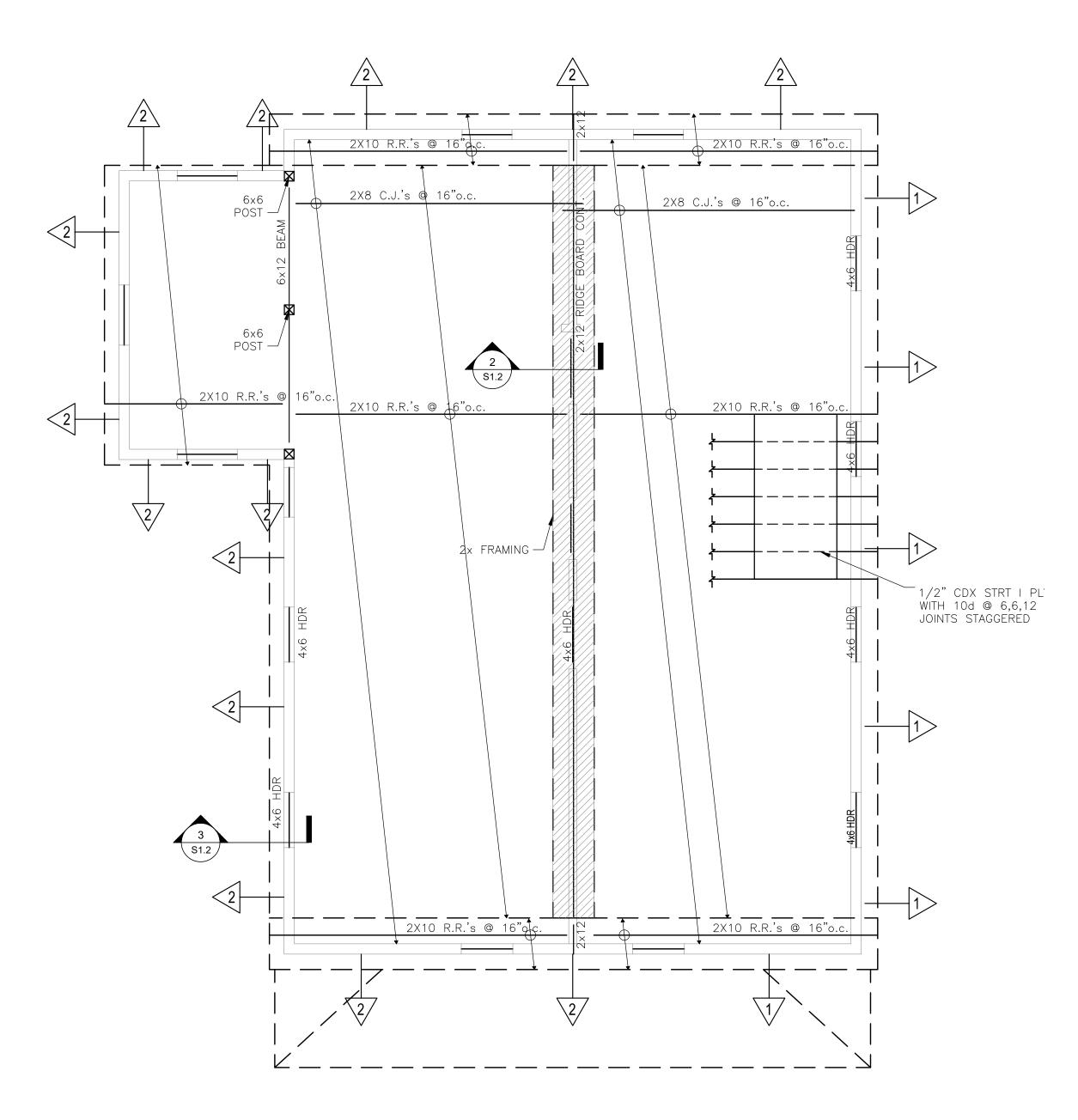
SHEARWALL DETAIL

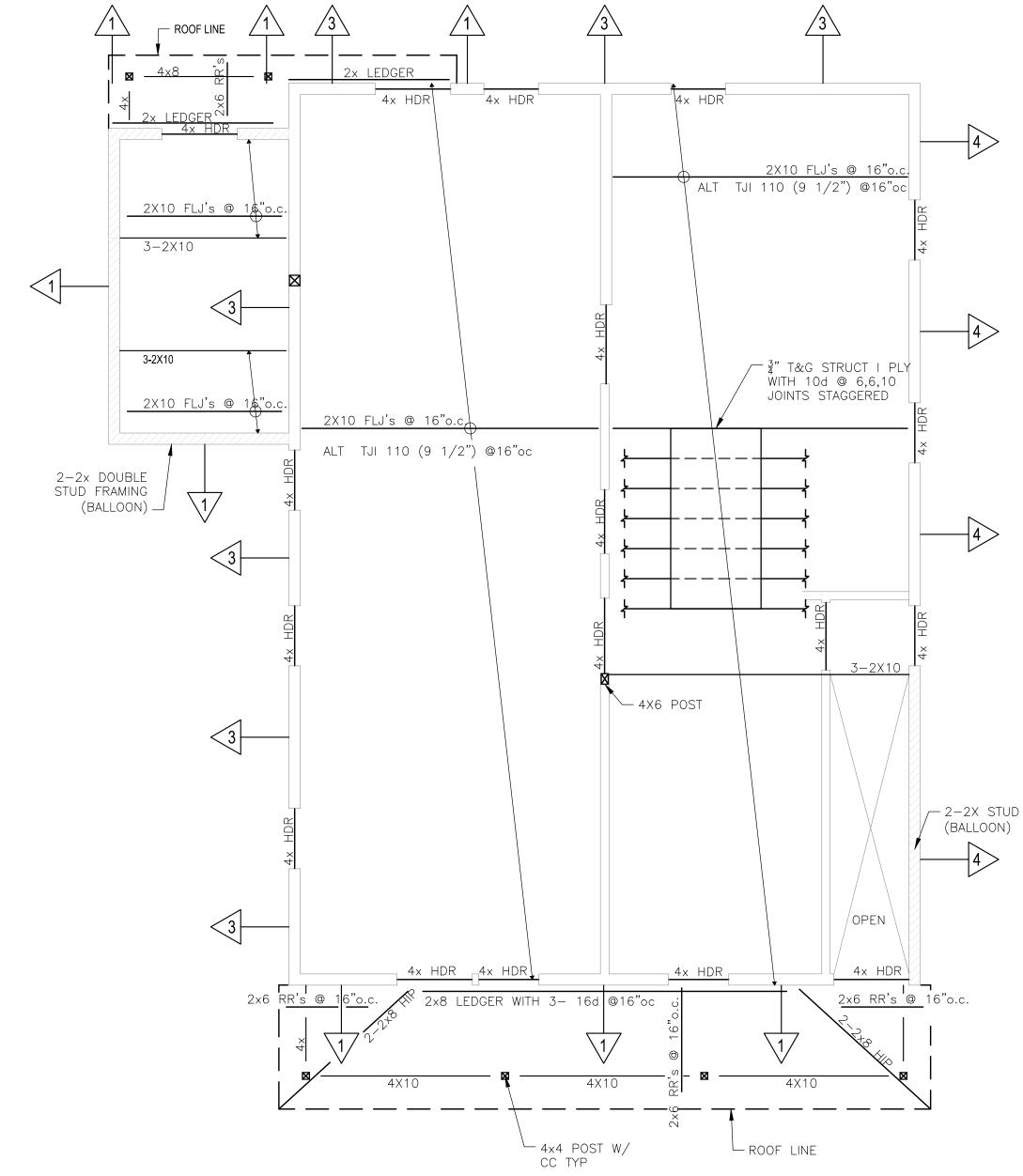


RIDGE STRAP



HEADER SCHEDULE





ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

SECOND FLOOR FRAMING PLAN SCALE: 1/4" = 1'-0"

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PROPOSED FRAMING PLANS & DETAILS

File No. 20013 STRUCTURAL Date 04/28/22

Sheet No

5-1.2

DRAG STRUT DETAIL SCALE: 3/4" = 1'-0"